

REMARKS

This Amendment is responsive to the Office Action dated February 11, 2003. Claims 1-20 are pending in this application. Claims 1, 2, 6, 10, 14, 16 and 19 are amended herein. Claims 7 and 11 have been cancelled, herewith, without prejudice. A request for a one-month extension of time and appropriate fees are enclosed. If necessary, please charge any deficit, or credit any surplus to Deposit Account No. 01-1960.

I. INTRODUCTION

Examiner alleges that no Information Disclosure Statement was submitted. The drawings were objected to for being unclear and containing informalities. The Abstract was not specifically objected to, however, the Examiner has reminded Applicant that the Abstract should be clear and concise and devoid of repetitive information. The Specification was objected to for containing unclear nomenclature. Claims 14 and 16 were objected to for containing informalities. Claims 1, 6-9 and 14-18 are cited as being rejected under 35 U.S.C. 112, second paragraph, however, specific reasons for this rejection are only given for claims 1, 6, 14, 17 and 18. Claims 10, 11, 14, 16 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by US patent No. 4,226,164 issued to Carter (herein after "Carter"). Claims 1 and 6-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 771,968 issued to Steer-Webster (herein after "Steer-Webster"), in view of Carter. Claims 1-20

are rejected under 35 U.S.C. 103(a) as being unpatentable over Steer-Webster in view of US patent No. 5,937,885 issued to Sampson (herein after "Sampson").

II. INFORMATION DISCLOSURE STATEMENT

Examiner states that no Information Disclosure Statement was submitted. However, Applicant submitted the Information Disclosure Statement on January 9, 2002, and the PTO acknowledged receipt, thereof, OIPE JC 136, Feb. 11, 2002.

III. DRAWINGS OBJECTION

The drawings were objected to under 37 CFR 1.83(a) for failing to show every feature of the invention specified in the claims. First, claim 8 recites the "coupler of claim 7, wherein the sectors may be resiliently pried and separated with a sharp blade of a common tool after the snap locking action." The Examiners contend that this "feature" is not shown in the claims. The Examiner further states that "a proposed drawing correction or corrected drawings are required in reply to the Office Action to avoid abandonment of the application." Applicant respectfully asserts that this claim limitation is not a structural "feature" as required by 37 CFR 1.83(a) and that the limitation is merely functional claim language because it explains capabilities of the sectors 21, 23. Stated differently, Applicant is not trying to claim a "sharp blade" as a feature of the invention. Rather, Applicant uses this language to describe functionality of the "sector." Therefore, the broader question is whether the claim limitation satisfies

the requirements 35 U.S.C. § 112, second paragraph. Application respectfully asserts that it does. Functional claim language should be construed by what it fairly conveys to a person of ordinary skill in the art in the context to which it is used. MPEP 2173.05(g). If Applicant is unpersuasive in argument, Applicant respectfully requests that the objection be renewed or a new rejection set forth, and that the patent application not be held in abandonment.

Second, in claim 10, the “mating surfaces comprising a portion defined by a set of lines parallel to the axis of the annular surfaces” was objected to because this claim limitation is not clearly illustrated in the drawings. Applicant has amended the specification to point out that the “set of parallel lines” embodies ribs 32a and 32b. Applicant respectfully submits that the claim limitation is clear and definite in light of the amendment. If Applicant is unpersuasive in argument, Applicant respectfully requests that the objection be renewed or a new rejection set forth, and that the patent application not be held in abandonment.

Third, in claim 14, the claim limitation of a “second conduit having bosses or threads” was objected to under 37 CFR 1.83(a), because the “threads” are not illustrated in any of the drawings and only bosses 20 are illustrated. Applicant has therefore amended this claim language to replace the claim limitation with a generic term, “a fastener” to include bosses or threads as disclosed in the specification. Applicant respectfully submits that the amended limitation is clear and definite. If Applicant is unpersuasive in argument, Applicant respectfully

requests that the objection be renewed or a new rejection set forth, and that the patent application not be held in abandonment.

The drawings were further objected to because a bracket should embrace the illustrations of Figs. 1 and 2, and lead lines are missing from reference numbers 25a and 38b. Also reference number 26b is referred to in the specification but not illustration. Applicant agrees to make the changes to the drawings in accordance with MPEP 608.02(b).

IV. SPECIFICATION OBJECTION

The specification was objected to as ambiguous because, on page 5, "a coupling 19," and "a cylinder 19," were disclosed. This problem has been corrected by this Amendment.

V. CLAIM OBJECTIONS

Claims 14 and 16 were objected to for containing informalities. The problems have been corrected by this Amendment.

VI. CLAIM REJECTIONS UNDER 35 U.S.C. § 112, SECOND PARAGRAPH

Claims 1, 6-9 and 14-18 are cited as being rejected under 35 U.S.C. 112, second paragraph, however, specific reasons for this rejection are only given for claims 1, 6, 14, 17 and 18. Therefore, claims 1, 6, 14, 17 and 18 have been corrected for the indefinite language cited.

VII. CLAIM REJECTIONS UNDER 35 U.S.C. § 102(b).

Claims 10, 11, 14, 16 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Carter.

Regarding claim 10, an amendment has been made to add the limitation of a stopping flange 40a as illustrated in Fig. 2 of the present invention. The stopping flanges 40a and 40b are novel structure that prevents relative axial movement of sectors 21 and 23. This novel structure is not disclosed by Carter or any of the other cited references. Carter, on the other hand, uses a protrusion 56 and groove 52 to prevent axial movement. Applicant respectfully asserts that stopping flange 40a, of the present invention, is entirely different structure than the protrusion 56 and groove 52 as disclosed by Carter. The stopping flanges are further explained in paragraphs [0029] and [0030] of the present invention.

Claim 11, has been cancelled, herein without prejudice.

Regarding claim 14, an amendment has been made to add the limitation of a stopping flange 40a as discussed above. For the same reasons, Applicant respectfully asserts that claim 14 as amended is patentable over the cited references. Claims 16 and 17 depend from claim 14 and therefore contain all its limitations. Applicant respectfully asserts that claims 16 and 17 are likewise patentable.

VIII. CLAIM REJECTIONS UNDER 35 U.S.C. § 103(a) AS UNPATENTABLE OVER STEER-WEBSTER IN VIEW OF CARTER.

Claims 1 and 6-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steer-Webster in view of Carter. As to claim 1, Examiner

contends that Steer-Webster discloses a "1st Flange" of the first conduit. In doing so, Examiner points to a "line" in Fig. 2 of Steer-Webster. Applicant respectfully asserts that this "line" does not clearly disclose a 1st flange and that the line could be any structure or a stay mark. No mention anywhere within the reference suggests that this "line" is a flange or anything else. Applicant respectfully asserts that a person of ordinary skill in the pertinent art would not conclude that the "line" teaches a flange. Applicant respectfully contends that claim 1 is allowable over Steer-Webster in view of Carter. If the Examiner is unpersuaded by Applicant's stated position, Applicant respectfully requests that Examiner provide further evidence or explanation as to the disclosure of the "1st flange."

Independent claim 6 and dependent claim 7 were rejected as obvious as taught by Steer-Webster in view of Carter. As to claim 7, none of the references discloses axial elongated ribs 26a, 26b, 32a, and 32b. In the disclosure, paragraph [0026], they are referred to as ribs or tongues. Applicant has amended independent claim 6 to contain the limitations of claim 7. Applicant respectfully asserts that amended claim 6 is patentable over the cited references.

Dependent claims 8 and 9 were similarly rejected over Steer-Webster in view of Carter. Applicant contends that dependent claims 8 and 9 are patentable for their dependency on independent claim 6.

Claim 10 was similarly rejected as obvious as taught by Steer-Webster in view of Carter. Claim 10 has been amended to include stopping flange 40a, 40b. This structure is illustrated in Fig. 2 and explained in paragraphs [0029] and

[0030], and is not disclosed in any of the references. Applicant respectfully asserts that claim 10, as amended, is patentable.

Claim 11 was similarly rejected as obvious as taught by Steer-Webster in view of Carter. Applicant has cancelled claim 11 without prejudice.

Claim 12 was similarly rejected as obvious as taught by Steer-Webster in view of Carter. Applicant respectfully asserts that none of the references disclose a locking flange 50b protruding axially from an end face of the coupler. Applicant believes that this claim is patentable, as is, and in the alternative respectfully asks the Examiner to concisely point to a teaching or suggestion regarding this claim limitation.

Claim 13 was similarly rejected as obvious as taught by Steer-Webster in view of Carter. As noted above referring to claim 1, Applicant contends that none of the references disclose a pipe having first and second flanges. Applicant believes that this claim is patentable, as is, and in the alternative respectfully asks the Examiner to concisely point to a teaching or suggestion regarding this claim limitation.

Claim 14 was similarly rejected as obvious as taught by Steer-Webster in view of Carter. Claim 14 has been amended, as claim 10 discussed above, to include stopping flange 40a and 40b. Applicant respectfully asserts that claim 14, as amended, is patentable.

Dependent claims 15-18 were similarly rejected as obvious as taught by Steer-Webster in view of Carter. Applicant respectfully asserts that these claims are allowable for their dependency on amended claim 14.

Method claims 19 and 20 were rejected as obvious as taught by Steer-Webster. Examiner contends that the prior art device, being the same as the device described in the specification of the present invention, inherently performs the same process as the present invention. Applicant responds by referring to Fig. 8 that illustrates the process of claims 19 and 20, and also to paragraph [0046]. Specifically, the “flexibly forcing the sectors radially inward to snap lock configuration,” is not disclosed by any of the references. Additionally, as explained in paragraph [0046], this is accomplished by “hinging” the two sectors together. Claim 19 has been amended to more clearly point out this novelty. Fig. 8 further illustrates the “hinging.” This limitation is not inherent in identical structure disclosed in the prior art because rib 32a and groove 34a are novel structure, not disclosed in any of the references, as explained in paragraph [0046].

IX. CLAIM REJECTIONS UNDER 35 U.S.C. § 103(a) AS UNPATENTABLE OVER STEER-WEBSTER IN VIEW OF SAMPSON.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steer-Webster in view of Sampson.

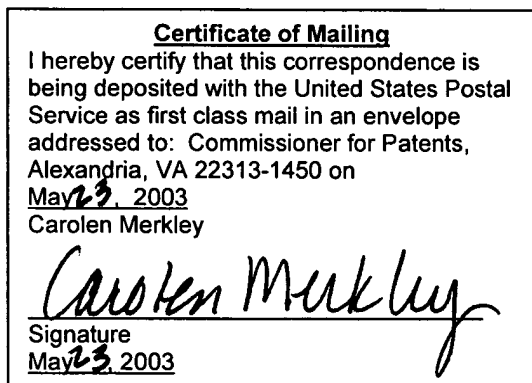
Regarding claim 2, an amendment has been made to include ribs 32a, 32b, 26a and 26b, as well as channels 30a, 30b, 34a and 34b. These structures are not disclosed anywhere in any of the references. Claims 3-5 depend from claim 2 and Applicant respectfully asserts that these claims are likewise allowable.

Regarding claims 1, and 6-20, these claims have been discussed, herein, and all previous arguments and amendments are made in light of Sampson, as well.


X. CONCLUSION

In conclusion, Applicants respectfully asserts that independent claims 1 and 13 are patentable. Also independent claims 2, 6, 10, 12, 14, and 19 as amended, are in a patentable condition. Claims 3-5, 8, 9, 15-18, 20 are dependent claims, and contain all limitations of claims from which they depend. For this reason Applicant asserts that these claims are likewise patentable.

Based on the above amendments and accompanying remarks, Applicant respectfully submits that all pending claims are in condition for allowance and earnestly solicits a notice thereof. Applicant encourages the Examiner to telephone the undersigned attorney if it appears that a telephone conference would facilitate allowance of the application.



Respectfully submitted,


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ATTACHMENT

Version With Markings To Show Changes Made

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GROUP 3600

In The Specification:

Paragraph	Replacement Paragraph Showing Changes
Paragraph [0024]	<p>The quick coupler 10 in this embodiment comprises two identical pieces or sectors 21 and 23 that combine to form a nut as shown in Fig. 2. Thus, the sectors 21 and 23 cooperate to form the single quick coupler 10 in the form of a nut or housing which connects the conduit 14 of the shank assembly 12 to the conduit 18 of the valve body 16, as shown in Fig. 5. The coupler 10 has opposite end faces and an annular hole extending along a central axis between the opposite end faces of the coupler. In the preferred embodiment, the two pieces form sectors 21, 23 of a nut. The sectors 21, 23 together form an annular hole for surrounding ends of the two conduits 14, 18. The sectors 21, 23 have respective axial ends adjacent end faces of the nut for surrounding the ends of the two conduits. In the operative environment, one of the conduits, in this case the conduit 14, may have an annular flange 15, while the other conduit, such as the conduit 18, may be provided with the shape of a cylinder 19 having a plurality of lugs 20 extending radially from its outer surface. It will be apparent that this same quick coupler 10 can be advantageously used to connect any two conduits with ends similar to those of the conduits 14 and 18.</p>

Paragraph	Replacement Paragraph Showing Changes
Paragraph [0031]	<p>One aspect of the invention of special interest is that the pieces making up the sectors 21, 23 are identical in shape and size, and that the mating surfaces are two identical pairs of complimentary mating surfaces. The sectors 21, 23 are separably joined along the complimentary mating surfaces. Furthermore, the structure for preventing or blocking relative radial and axial movement between the sectors is provided by the complimentary mating surfaces. <u>In this manner, ribs 32a and 32b act as a set of lines parallel to the annular hole.</u> The complimentary mating surfaces have a portion defined by a set of lines parallel to the axis of the annular hole and a portion perpendicular to the axis. The portion of the mating surfaces defined by lines parallel to the axis prevents relative movement of the sectors in a plurality of radial directions, and the portion of the mating surfaces that is perpendicular to the axis prevents relative movement of the sectors in a plurality of axial directions when the sectors are assembled together.</p>

In the Claims:

The claims have been amended as follows:

- 1 1. (Amended) A coupler for joining a first conduit having a first
- 2 diameter and a second conduit, the first conduit having an axis and a first
- 3 outwardly extending flange having a second diameter axially spaced from a
- 4 second outwardly extending flange having a third diameter, the coupler
- 5 comprising:

6 a housing including an annular hole having an outer diameter and an inner
7 diameter;

8 the outer diameter of the annular hole being greater than the second
9 diameter of the first outwardly extending flange;

10 the inner diameter of the annular hole being greater than the first diameter
11 of the first conduit, to permit axial movement of the coupler over the first conduit;

12 the inner diameter of the annular hole being less than the second diameter
13 of the first outwardly extending flange and less than the third diameter of the
14 second outwardly extending flange to prohibit movement of portions of the
15 housing defining the annular hole axially along the first conduit over either of the
16 first outwardly extending flange and the second outwardly extending flange;

17 the housing and the annular hole being formed with at least two sectors
18 radially compressible into a snap fit relationship with portions of the sectors
19 defining the annular hole disposed between the first outwardly extending flange
20 and the second outwardly extending flange; whereby

21 the coupler is moveable over the first outwardly extending flange to
22 engage the second conduit, with the a portions of the sectors defining the
23 annular hole disposed between the first outwardly extending flange and the
24 second outwardly extending flange.

1 2. (Amended) A coupler in the form of a housing having opposite end
2 faces, the coupler for joining two conduits together, wherein the coupler
3 comprises:

4 an annular hole extending along an axis between said opposite end faces
5 of the housing, the annular hole comprising a first inner diameter, lugs having a
6 second inner diameter, and a flange having a third inner diameter, wherein the
7 first diameter is greater than the second diameter, and the second diameter is
8 greater than the third diameter;

9 the housing comprising a plurality of sectors that snap together; and

10 **wherein the plurality of sectors each have a rib;**

11 **and wherein each said rib lockingly engages a respective channel to**
12 **prevent relative movement of the sectors in a plurality of radial directions.**

13 ~~the plurality of sectors being identical to each other in shape and size.~~

1 6. (Amended) A coupler in the form of a nut having an annular hole
2 extending between end faces and centered on an axis, the coupler being
3 adapted for coupling two conduits together by a bayonet twist and lock action,
4 comprising:

5 two sectors of the nut ~~forming having portions~~ defining the annular hole
6 and for surrounding ends of the two conduits by respective axial ends adjacent
7 end faces of the nut;

8 the sectors being sufficiently resilient to snap lock together;

9 wherein the sectors snap lock together by relative radially inward
10 movement; **and**

11 **further comprising at least one axially elongated rib forming a**
12 **radially outwardly facing groove and a another axially elongated rib**
13 **forming a radially inwardly facing groove on each of the two sectors.**

14 wherein the ribs resiliently slide over each other into a seated position
15 during a snap locking action of the two sectors.

1 10. (Amended) A coupler in the form of a nut, the nut having two end
2 faces and an annular hole extending between the two end faces along an axis,
3 the coupler comprising:
4 the nut having two separable sectors joined along mating surfaces, the
5 mating surfaces comprising a portion defined by a set of lines parallel to the axis
6 of the annular hole and a portion perpendicular to said axis; and

7 wherein the portion of said mating surfaces defined by lines parallel to the
8 axis prevents relative movement of the sectors in a plurality of radial directions
9 and the portion of said mating surfaces that is perpendicular to said axis prevent
10 relative movement of the sectors in a plurality of axial directions when said
11 sectors are assembled together, said mating surfaces that is perpendicular to
12 said axis comprising a stopping flange.

1 14. (Amended) A coupler and conduits combination, comprising:

2 (a) a first conduit having an outwardly extending flange on an end of the
3 first conduit,

4 (b) a second conduit having a fastener ~~bosses or threads~~ extending
5 radially outward on an end of the second conduit,

6 (c) a coupler forming an annular hole, said coupler having portions
7 defining said annular hole, said portions having an inwardly extending flange that
8 receives and holds the outwardly extending flange on the end of the first conduit

9 and complementary fasten ~~r lugs or threads~~ that couple couples to the

10 fast ner ~~bosses or threads~~ on the end of the second conduit for a coupled

11 configuration;

12 wherein the coupler comprises two sectors connected in fixed relation by

13 relative radial movement in a snap lock action; and

14 wherein each of the two sectors has a stopping flange that prevents

15 relative axial movement of the sectors.

1 16. (Amended) The combination of claim 14, wherein the two sectors

2 snap locking lock together with said portions defining the annular hole

3 surrounding the first conduit and retained thereon by interference of the said

4 outwardly and inwardly extending flanges.

1 19. (Amended) A method of using a coupler in the form of a nut having a first

2 sector and a second sector defining an annular hole extending between end faces of

3 the nut, the coupler being adapted for coupling a first and a second conduit together,

4 the method comprising the steps of:

5 (a) separating said first and the second sectors of the coupler sufficiently to

6 receive the first conduit,

7 (b) surrounding an outwardly extending flange of the first conduit by portions of

8 the sectors defining said annular hole,

9 (c) flexibly hinging ~~forcing~~ the sectors radially inwardly to a snap lock

10 configuration, wherein the first and second sectors of the coupler form said nut and

11 surround the first conduit, and

- 12 (d) moving the coupler axially and rotationally with respect to the second conduit
- 13 thereby coupling the second conduit to the first conduit.

1